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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,843	01/23/2004	Glen A. Griffith	AB-315U	7704

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EXAMINER	
GEDEON, BRIAN T	

ART UNIT	PAPER NUMBER
3766	

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/763,843	GRIFFITH, GLEN A.	
	Examiner	Art Unit	
	Brian T. Gedeon	3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9 and 11-20* is/are rejected.

7)☒ Claim(s) *8 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/7/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 15 recites the limitation "externally-generated signals" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4-7, 8, 12-15, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Markowitz et al. (US Patent no. 5,626,630) in view of Adams (US Patent no. 5,383,915).

In regards to the above claims, Markowitz et al. discloses a telemetry system with a remote station 10 to communicate with an implantable medical device 12 through a repeater 14, col 3 lines 19-22. A transceiver transmits signals to the implanted device 12 at a first frequency, and transmits signals to the remote station at a second frequency, col3 lines 54-57. The repeater 14 gathers information from the implanted device 12, and then the repeater 12 relays that information to the remote station 10, col

3 lines 31-35. The device disclose by Markowitz et al. also utilizes antennae 28 and 30 for transmitting and receiving wireless signals. Transmitting circuitry 58 and communication circuitry 62 are also described, col 7 lines 20-36. Adams discloses a similar system with a repeater 12, and implanted medical device 14 and a remote site programmer 18, col 3 lines 43-51 and 1-5. Informational data is transmitted in the form of a coded RF signal, col 3 lines 56-58. Further, the implanted device 14 of Adams does not have to be limited to a pacemaker or defibrillator, col 3 lines 45-47. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the above references to a repeater system for linking data to and from a remotely located programmer and an implanted medical device.

In regards to claims 4, 5 and 6, Markowitz et al. further describes the repeater device 14 as being associated with a transceiver 18 for data communication. The transceiver 18 is a multi-frequency device because it transmits signals to the implanted device 12 at a first frequency, and transmits signal to the remote station 10 at a second frequency, col 3 lines 53-57. Transceiver 18 is connected to transceiver 20 through a processor/buffer, col 3 lines 61-62. Transmitting circuitry 58 and communications circuitry 62 for transceiver 20 contain the necessary antenna for wireless signal transmission, col 7 lines 20-36. Because the transceiver for transmitting and receiving signals in the repeater is a multi-frequency device, Markowitz et al. do not describe a second transmitting/receiving means. However, the Examiner contends that the multi-frequency transmitting/receiving device is an equal substitute for two separate transmitting/receiving devices, and that it would have been obvious to one of ordinary

skill in the art at the time the invention was made to use such separate circuitry for transmitting/receiving different frequencies, since it has been held that duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

In regard to claim 7, Markowitz et al. substantially describes the invention as claimed except for the aligning of the repeater coil with that of the implantable device. Adams teaches that the repeater 12 antenna is aligned near the implanted device's 14 antenna, col 2 lines 29-32. Therefore it would have been obvious to align the communication path between the repeater and the implanted device in order to prevent attenuation or loss of signal transmission between the devices.

In regard to claim 9, Markowitz et al. describes the invention as claimed except for mounting the repeater onto a headband. The repeater 14 described by Markowitz et al. is worn externally and is compact in size and light in weight; the repeater may be designed to look like a beeper or pager, col 3 lines 26-29. In view of the described size by Markowitz, it would not have been beyond one of ordinary skill in the art to mount a device of such size onto a headband.

In regard to claim 15, the implanted medical device 12 described by Markowitz et al. has a transponder 17 comprising an antenna 28 for receiving signals from the repeater 14, col 4 lines 7-11. The antenna is assumed to serve as an input port from "externally-generated signals" from the repeater.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Markowitz et al. (US Patent no. 5,626,630) in view of Adams (US Patent no. 5,383,915), further in view of Schulman et al. (US Patent no. 5,603,726).

Markowitz et al. substantially describes the invention as claimed including the communication between an implanted medical device and a repeater through a frequency that is different from the frequency at which the repeater and remote unit communicate. However, Markowitz et al. does not disclose the value of that frequency. Schulman et al. describes a mutlichannel cochlear implant with a telemetry transmitter 42 that oscillates at a frequency 10.7 MHz between the headpiece 14 and the implantable device 12. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have an implantable device communicate at 10.7 MHz with the wearable component of the system, since Schulman et al. explicitly teaches it.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Markowitz et al. (US Patent no. 5,626,630) in view of Adams (US Patent no. 5,383,915), further in view of Stover et al. (US Patent no. 6,804,561).

Markowitz et al. substantially describes the invention as claimed including the communication between remote unit and a repeater through a frequency that is different from the frequency at which the repeater and implanted medical device communicate. However, Markowitz et al. does not disclose the value of that frequency. Stover et al. describes antennae for neurostimulators that communicate at frequencies around 402-405 MHz, because the Federal Communications Commission designated those

frequencies for use with medical devices, col 2 lines 14-17. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have medical devices communicate at 400 MHz since Stover et al. explicitly teaches that frequencies at or near 400 MHz are designated for medical devices.

Claims 12-14 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Markowitz et al. (US Patent no. 5,626,630) in view of Adams (US Patent no. 5,383,915), further in view of Schulman et al. (US Patent no. 5,603,726) and Stover et al. (US Patent no. 6,804,561).

In regards to claims 12 and 17-19, Markowitz et al. in view of Adams et al. substantially describe the invention as claimed, including the use of two separate frequencies for communication between the implanted device and the repeater, and between the remote unit and the repeater. The actual frequency values are not describes nor are designated by Markowitz et al. in view of Adams. However, the rejections made against claims 2 in view of Schulman et al. and the rejection made against claim 3 in view of Stover et al. obviate the frequency values, since the claimed values are explicitly described in the cited references.

In regards to claims 13, 14, and 20, Markowitz et al. in view of Adams substantially describe the invention as claimed, except do not disclose the values of the distances between the implanted medical device, the repeater, and the remote unit. Adams describes that the repeater 12 is placed over the implanted device 14 within a patient, col 3 lines 43-45; it can be applied from this reference that the distance between the implanted device and the repeater is a function of the amount of tissue between the

two devices. Secondly, both references describe the transmission of data from the repeater to a remote programming/monitoring unit; the use of the word "remote" allows for the interpretation that the remote unit is at a greater proximity from the repeater than the proximity between the implanted device and repeater, but an assumption as the actual distance cannot be made. Nevertheless, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determined the optimal distances between the device, since it has been held where the general conditions of a claim are disclosed in the prior art, discovering the optimum working value or ranges involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205, USPQ 215 (CCPA 198C).

Allowable Subject Matter

Claims 8 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Gedeon whose telephone number is (571) 272 3447. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on (571) 272 6996. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 3766

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Supervisory Patent Examiner
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BTG